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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,338	10/07/2003	Kenji Asuwa	500.43180X00	2663
20457	7590	11/19/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			LEE, PETER	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,338

Applicant(s)

ASUWA ET AL.

Examiner

Peter Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/07/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Reference numbers 30L' and 30R' as seen in Fig. 4 are referred to on page 10 lines 22-25, however are never explicitly mentioned as need be.

Reference numbers 6, 11, 22, and 23 are seen in Fig. 7 however are not mentioned anywhere in the specifications.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Reference to a "...light scanning apparatus 20..." in Fig. 7 is made on page 7 line 16 of the specification. However this part number is not to be seen in Fig. 7 or any subsequent Figures.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (US pg-pub 2001/0031152) in view of Komori et al. (US pn 5247316).

Kaneko teaches a color image forming apparatus (Fig. 1 part 100; note page 2 paragraph [0036]) comprising: four photoconductive drums (fig. 1 parts 1a, 1b, 1c, 1d) (ie. plurality of image carriers) arranged in a row, and a plurality of development apparatuses (fig. 1 parts 4a, 4b, 4c, 4d) so as to be substantially perpendicular with respect to a direction of the row of the plurality of image carriers, scanner units (Fig. 1 parts 3a, 3b, 3c, 3d) (ie. light scanning apparatus) for irradiating a laser beam based on an image information to form an electrostatic latent image on the photosensitive drums (page 2 paragraph [0036]), and polygon mirrors (fig. 1 parts 9a, 9b, 9c, 9d) (ie. scanning light reflecting mirror);

said scanner units are disposed on the opposite side of the said development apparatuses to said photoconductive drums, so that said scanning beam is irradiated from said light scanning units on said polygon mirror (ie. scanning light reflecting mirror) through a space between said plurality of development apparatuses.

Kaneko does not teach having the polygon mirror and the photosensitive drums being mounted on a common supporting member to constitute a first member and having the scanning units built into a separate second unit.

It is Komori who teaches having the polygon mirror (fig. 6 part 102) and photosensitive drum (fig. 6 part 15) being part of the same process cartridge (col. 9 lines 53-56) (ie. first unit), and having the semi-conductive laser (fig. 6 part 103) (ie. light scanning apparatus) being built onto a separate base plate (fig. 6 part 110) (ie. second unit). Therefore, by applying the single process cartridge design with the polygon mirror and photosensitive drum being part of the same unit, and putting it into use in a color forming image apparatus such as the one taught by Kaneko, the limitation of the said plurality of photosensitive drums and said plurality of polygon beam reflecting mirrors being supported by a common supporting member is taught. It is feasible to have the process cartridge taught by Komori be used in the invention taught by Kaneko because Kaneko also utilizes process cartridges in his image apparatus.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a process cartridge as taught by Komori that incorporates the photoconductive drum and the polygon beam reflecting mirror in a single unit and builds the laser beam apparatus on a separate platform, and taking this cartridge for use in a color image forming apparatus such as that taught by Kaneko which also utilizes process cartridges. One of ordinary skill in the art would have been motivated to do so because the process cartridge as taught by Komori that builds the photoconductive drum/polygon mirror on separate platforms as the laser beam apparatus, is known to be less influenced by deformation and twisting of the supporting members which leads to more accurate laser beam irradiation onto the

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photoconductive drum (Komori col. 2 lines 34-37 and col. 9 lines 65-67). The combination of the two inventions in particular aids in teaching the limitation seen in claim 3.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Todome (US pn 6298586) teaches having a reflecting mirror in close proximity to the photoconductive drum.

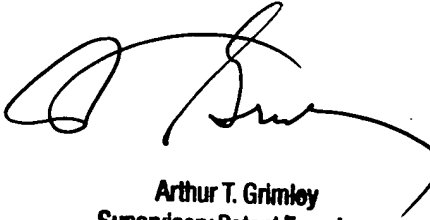
Hattori (US pa 10/642205) teaches a tandem color image forming apparatus with a similar set up as the applicants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Lee whose telephone number is 571-272-2846. The examiner can normally be reached on mon-fri 9:00 am-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PL 11/12/04



Arthur T. Grimley
Supervisory Patent Examiner
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